

# Draft Framework for Decision Tree and Initial Operating Plan

## Background

Over the past decades, there has been considerable disagreement over the causes and the relative importance of various factors contributing to the decline of many Delta aquatic species. Federal agencies engaged in developing the BDCP have acknowledged differences of opinion, and they are united in agreement that much additional insight can be gained through a more significant investment in applied science in the Delta.

It is not possible today to predict with a high degree of scientific certainty the relationships between the Bay-Delta ecosystem and its species that will be available under the conditions affecting species at the time of initial operations of the new facility. Notwithstanding this uncertainty, the initial operating criteria, in combination with other conservation measures, designed to achieve both the goals and objectives of the BDCP will contribute to the recovery of covered species based on the best information available on these biological outcomes, the BDCP program will do so in a manner which respects the

Therefore, the BDCP program will at its outset utilize a process to establish a consensus regarding the ability of the operating criteria with certain discrete conditions, with other conservation measures contribute to the recovery of covered species and reliability through a structured, scientifically driven process. It is not possible to identify a complete set of operating criteria prior to commencement of the system, taking into consideration the performance of the "early implementation" other relevant factors.

Thereafter, the adaptive management program (to be described in a revised BDCP control adjustments in the BDCP program. This adaptive management program in the BDCP program. This adaptive management program will change in time habitat and program resulting from the conclusions of the Decision Tree process. The program will also apply to continued adjustments in operating criteria as changes to the other conservation measures.

The Decision Tree process will involve (1) a clear identification of the conceptual models capturing uncertainties regarding the various proposed for the targeted operating criteria to the goals and objectives of the BDCP; (2) development of a plan and data collection program to assess the uncertainty of (3) an update assessment of the efficiency of possible BDCP conservation measures to achieve the goals and objectives; (4) identification of BDCP operating criteria that correspond to the potential outcomes that may result from the

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4 RED FLAG This document create unnecessary confusion by bifurcating adaptive mgmt decisions into before and after operation facility, muddying the exact nature of versus modified operating criteria among other things. We strongly suggest an alternative approach: (1) the default operating criteria based on the best available science that permitting, which will go into effect absent definitive findings by the permitting agencies modifying these criteria will better achieve Plan's biological objectives (2) identify a range below and above the default criteria within modifications may be made; (3) identify key uncertainties that affect potential modification within that range (not uncertainties as to of the flow manipulations); (4) the while this document seems to inappropriately suggest uncertainties as to how such manipulations made most effectively (4) create a set of decision trees articulating hypotheses to be tested, results will be evaluated, and triggers for action to modify or not modify the default criteria; and (5) do not distinguish between modifications based on decision tree adaptive management before or after operation (because it is unlikely that hypotheses will be definitely tested and resolved prior to initial operations, bifurcating the management process creates false expectations when resolution will be reached).

which will contribute in a manner that best addresses the BDCP. detail remains to be worked out regarding the structure of the Decision Trees, including the hypotheses to be evaluated and the specifics of the making process and the addition, the structure of the science program and general governance of BDCP are critically linked to the Decision Tree process.

Guiding Principles

- The BDCP in its totality will be designed to achieve the biological BDCP over the term of the permit. **Nothing is critical to the Conservation Measure 1 (CVM) combination with other elements of the BDCP, which give the biological goals and objectives of the term of the permit.**
- CM1 will propose a complete set of operating criteria for the new CM1 will also identify a discrete subset of these initial **critical parameters** (e.g. fall X2; spring outflows; **predation which will be the subject of the Decision Tree process, described below.** For each of these specific range that will be subject to **informed decision by** and these ranges will included in the final permit authorization as possible outcomes of the science developed **to address the alternative that is protective of the species of concern and designated critical habitat as the operating criteria.**
- At the time of permit issuance and at the outset of the Decision criteria prescribing initial project operation **that is based on current scientific understanding.** CM1 will also identify a specified range of the discrete operating parameters where uncertainty has been identified CVP operations (e.g. X2; spring outflow, entrainment, etc), with the range adjustments that might be made if uncertainties are resolved as predicted hypotheses. **A targeted collaborative joint science program will be the information needed to execute the Decision Tree process through the permit issuance and completion of construction of a delta conveyance process will be open and is intended to result in improved scientific understandings that will provide the basis for reevaluating the operating the subject of the Decision tree.**
- The outcome of the Decision Tree process therefore, **will be the selected decisions for the permit that will have been the subject of the D This will occur prior to the commencing of operations for the new planning purposes.** parties anticipate **that the decision will be within the range framed at the time of permit issuance.**

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RED FLAG This principle should also state clearly that biological protective measures included as permit terms and conditions to implementation of specific conservation measures as well as implementation of the program totality, per earlier guidance from permitting agencies.

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RED FLAG Labeling of these flow requirements as "significant uncertainties" and identifying them as the only actions of the Decision Tree is fundamentally flawed. There are disagreements between the fishery agencies and DWR/water exporters over the specific flow requirements. The agencies have determined the Fall X2 and South D requirements based on the best available science and the agencies have also determined that additional spring outflows are required based on the best available science. Using this language have significant repercussions in public forums. documents should more narrowly focus (1) how to make flow requirements effective over time, (2) whether complementary flow measures can be shown over time to be as flows in achieving biological goals and

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RED FLAG The selection of three operational parameters above and language here suggests that the Decision Tree is a ratchet that will only result in reduced or increased exports, rather than potentially result in reduced exports (substantially) and increased flow. The document should explicitly acknowledge that the flow adjustments up or down from the default operations.

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This statement is consistent with legal requirements, but other language in this document that suggests permitting a range, permitting alternative sets of operations, or having default operations, is not consistent with statement or requirements of law.

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Either the Decision Tree document or the governance document must clearly state that decision-makers in the decision-making process that will be used in making management decisions.

conjunction with the other component decisions, as defined in the full suite of operating criteria for the new dual conveyance system.

- Following the completion of the Decision Tree process for determining initial operating criteria for the project, the adaptive management program will then govern adjustments to all components of the BDCP program over the course of its implementation from that point on.
- The ultimately selected initial operating criteria will meet ESA and NCCPA requirements determined by the regulatory agencies based by current scientific understanding at that time.

### Preliminary Thoughts on Project Evaluation

- To facilitate a more timely completion of the BDCP planning process, the BDCP Effects Analysis will begin with using the operational criteria from the alternative that is modeled and analyzed in the Effects Analysis. The BDCP Effects Analysis will also evaluate values around each of the individual criteria set forth in the Decision Tree and evaluate those ranges. Acknowledging and embracing competing analytical approaches is an essential decision-making process, as it provides a basis for future investigations to address the issue.
- The operational criteria in the Effects Analysis are not and are not intended to represent the most likely outcome. The criteria analyzed potentially be selected as the most likely operating criteria for the SWP and BDCP but do not represent the most likely outcome. There is no "most likely" outcome.
- For the purpose of complying with ESA and NCCPA, the Effects Analysis must demonstrate at least the minimum of operating parameters addressed through Decision Tree process, in combination with implementation of all BDCP conservation measures, a "contribution to recovery" standard, within the field knowledge today.
- The Decision Tree will provide information for each of the operational criteria that will meet that standard in combination with the scientific understanding at that time, and will set the initial operating criteria for commencement of the new conveyance operations.
- The operations scenario ultimately chosen as the actual initial operating criteria shown by the available science to most efficiently achieve goals and objectives that contribute to the recovery of covered species.

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 RED FLAG: This language suggests that the BDCP effects analysis will continue the operational criteria of Alternative 1, which agencies have already rejected. My understanding is that this is the only alternative that has modeled and analyzed.

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 RED FLAG: State and federal required environmental analysis to be based on best available science, not what people happen or analyses that are not based on available science. There cannot be multiple inconsistent methods of analysis in the effects analysis or environmental documents. While documents should acknowledge competing approaches, the Effects Analysis and NEPA/CEQ documents must determine what the best scientific methodology is, and they cannot be two contradictory analyses.

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 RED FLAG: There must be a determination of the scientific evidence in context (e.g., the fishery agencies cannot reach conclusions regarding the scientific process underlying the Decision Tree). The agencies have default operational criteria to make a permitting decision.

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 RED FLAG: This is not a possible determination in advance that a hypothetical future scientific analysis can justify specific alternative operations that are not justified based on science. We will learn a great deal about coming 15 years, however, we cannot determine what changes in operations advanced knowledge will suggest.

### Next Steps

- Discussion and agreement on basic framework.
- Agreement on list of the key operating criteria that will be subject to the Decision Tree process (e.g. Fall X2; spring flow criteria; and south Delta OMR operating criteria).
- Agreement on uncertainties and hypotheses that should be addressed by decision trees.
- Agreement on the analytical approaches utilized in evaluating the initial operating criteria and the ranges that are encompassed within it for the key criteria Decision Tree process.
- ICF begins revisions to Effects Analysis. Concurrently, work continues on decision and analytical methodologies.

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RED FLAG: The agencies cannot avoid making a determination of what constitutes the best available scientific methodology/analytical approach; there cannot be multiple analytical approaches.